

Name _____

What are properties of matter?

Describe matter by defining the following and give examples of each.

<p>Physical property</p> <p>Definition:</p> <p>Examples:</p>	<p>Matter</p>	<p>Element</p> <p>Definition:</p> <p>Examples:</p>
<p>Chemical Property</p> <p>Definition:</p> <p>Examples:</p>		

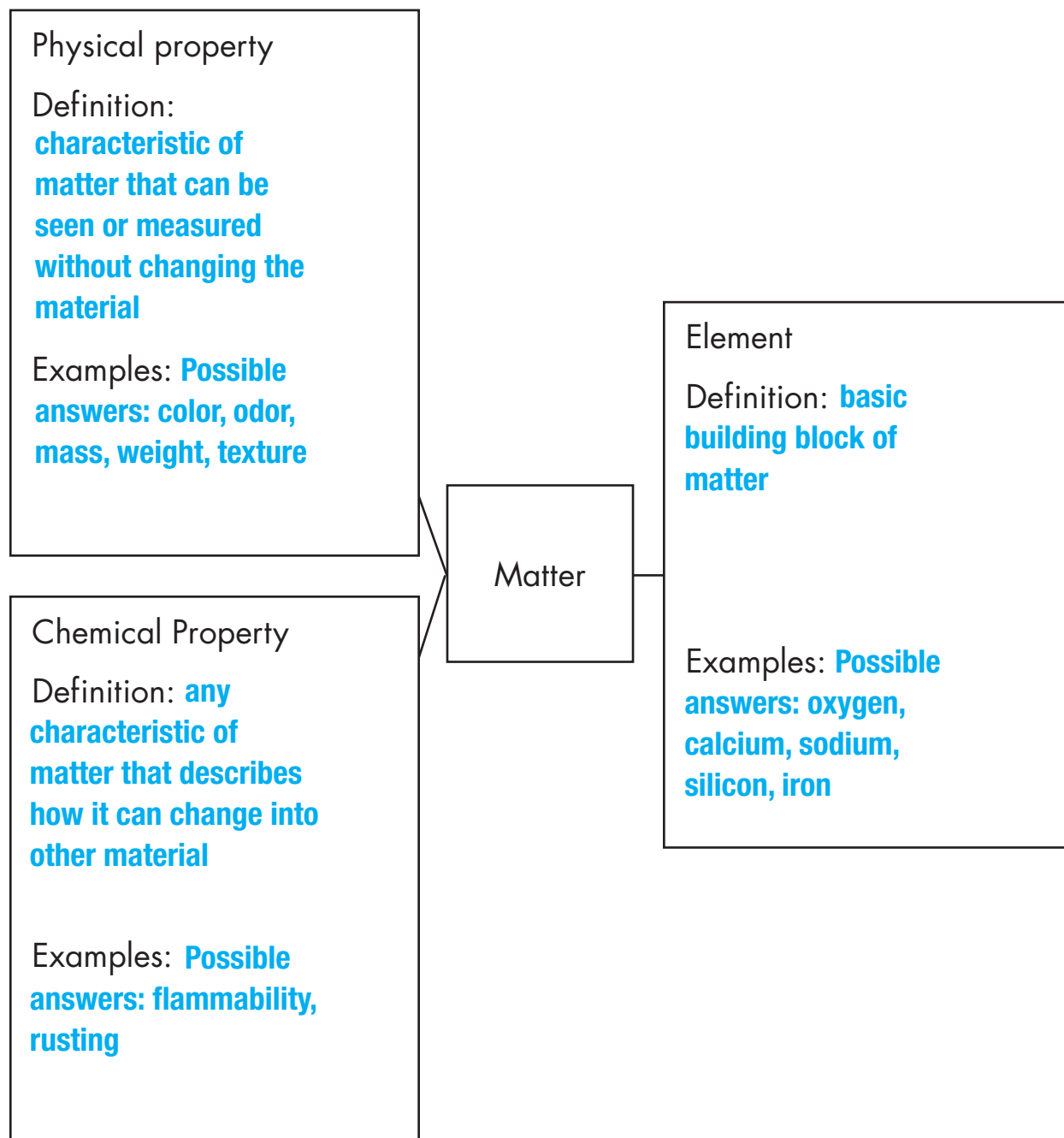


Notes for Home: Your child defined and gave examples of the physical and chemical properties of matter. Have your child identify physical properties of an item you hold up. Challenge your child to name at least 6 properties.

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Describe matter by defining the following and give examples of each.



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What makes up matter?

Summarize the information given for each part of the lesson.

Atoms and Elements

Molecules

Images of Molecules

Elements and the Periodic Table

Classifying Elements

Information on the Periodic Table

Groups and Periods

Metals and Their Properties

Metal Mixtures



Notes for Home: Your child summarized information about elements and the periodic table. Ask your child to explain the organization of the periodic table.

What makes up matter?

Summarize the information given for each part of the lesson.

Atoms and Elements

Possible answer: Elements are made up of atoms, which have protons, neutrons, and electrons. They are identified by their atomic number.

Molecules

Possible answer: A molecule is the smallest part of a substance made up of more than one atom that still has the properties of that substance.

Images of Molecules

Possible answer: Technology has been used to find and display the shapes of atoms and molecules.

Elements and the Periodic Table

Possible answer: Elements are organized into a periodic table in rows by atomic number and in columns by chemical properties.

Classifying Elements

Possible answer: Metals are solid, malleable, good conductors. Nonmetals are brittle, nonmalleable, poor conductors. Metalloids have properties of both.

Information on the Periodic Table

Possible answer: Atomic number, symbol, and name are given for each element. A column is a family and each row a period.

Groups and Periods

Possible answer: Elements in the same group have similar properties. Elements in the same period vary from very reactive to less reactive.

Metals and Their Properties

Possible answer: Most metals are shiny and reflect light. They are malleable and good conductors of heat and electricity.

Metal Mixtures

Possible answer: Alloys are mixtures of metals. Alloys may be stronger and sturdier than pure metals.



Notes for Home: Your child summarized information about elements and the periodic table. Ask your child to explain the organization of the periodic table.

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What are compounds?

Write each of these descriptions in the chart. Place descriptions that apply to any compound in the **Compound** side of the chart. Place descriptions that apply to salts in the **Salt** side of the chart.

It has at least one metal and one nonmetal element.

NaCl is the formula for a common salt.

It can be formed by sharing electrons.

It is formed by the reaction of a base and an acid.

It is a combination of two or more elements.

It dissolves in water.

Sugar is made up of oxygen, hydrogen, and carbon.

It is held together by opposite charges.

H₂O is the formula for water.

It forms crystals.

It melts only at very high temperatures.

Compound	Salt



Notes for Home: Your child identified characteristics of compounds in general and of salts specifically. Have your child demonstrate how salt dissolves in water.

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Compound	Salt
It can be formed by sharing electrons.	It has at least one metal and one nonmetal element.
It is a combination of two or more elements.	NaCl is the formula for a common salt.
Sugar is made up of oxygen, hydrogen, and carbon.	It is formed by the reaction of a base and an acid.
H ₂ O is the formula for water.	It dissolves in water.
	It is held together by opposite charges.
	It forms crystals.
	It melts only at very high temperatures.



Notes for Home: Your child identified characteristics of compounds in general and of salts specifically. Have your child demonstrate how salt dissolves in water.

How can we separate mixtures?

Read each list. Then write a statement to tell what the list describes.

1. take carrots out of a soup
2. use a filter to remove sand from water
3. use a magnet to attract metals

1. Solvent dissolves a substance. Water is a solvent.
2. Solute is the substance dissolved. Sugar is a solute.

1. made of only one kind of atom
2. have a chemical symbol
3. can't be divided into simpler substances

1. made of two or more elements
2. have a chemical formula
3. can be broken down into simpler substances

1. made of two or more substances
2. do not have a chemical symbol or formula
3. can be separated by physical means



Notes for Home: Your child identified what list items have in common. Give your child a mixture of plastic and metal paper clips and a magnet. Have your child show how to separate the paper clips.

How can we separate mixtures?

Read each list. Then write a statement to tell what the list describes.

1. take carrots out of a soup
2. use a filter to remove sand from water
3. use a magnet to attract metals

Each method can be used to separate mixtures.

1. Solvent dissolves a substance. Water is a solvent.
2. Solute is the substance dissolved. Sugar is a solute.

Solutes and solvents are parts of a solution.

1. made of only one kind of atom
2. have a chemical symbol
3. can't be divided into simpler substances

The list identifies characteristics of elements.

1. made of two or more elements
2. have a chemical formula
3. can be broken down into simpler substances

The list identifies characteristics of compounds.

1. made of two or more substances
2. do not have a chemical symbol or formula
3. can be separated by physical means

The list identifies characteristics of mixtures.



Notes for Home: Your child identified what list items have in common. Give your child a mixture of plastic and metal paper clips and a magnet. Have your child show how to separate the paper clips.